

REMARKS

In the Office Action dated 8 May 2003, the Examiner has allowed claims 1-13 and 20-81; rejected claims 14, 15, and 17 as anticipated by US Patent No. 6,265,114 (Ahn); and rejected claims 16 and 18 as obvious over Ahn in view of US Patent 5,806,424 (Elliot); and objected to claim 19 as depending from a rejected base claim. Reconsideration and withdrawal of these rejections are respectfully requested. A separate petition for a one-month extension of time accompanies this amendment.

I. Amendments

The present amendment amends claims 14-20. The changes to claims 15-19 are made merely to track the terminology in claim 14. Claim 20 has been amended to correct a typographical error.

II. Claims 14-18

Ahn provides a photolithographic mask that is designed to counter the proximity effect of closely-spaced mask holes. As explained in connection with Figures 1A-C (column 1, line 34 – column 2, line 10), the proximity effect is caused by constructive interference in the wavelength of light passing through adjacent mask holes. In response to this problem, Ahn proposes to resize the mask holes so that the final hole, after the proximity effect is taken into account, is the appropriate size to define the desired via or the like.

In rejecting claims 14, 15, and 17, the Examiner characterizes Ahn's photolithographic mask as a "printing stencil" with "printing orifices ... positioned for alignment with a contact of an electronic component during the solder printing operation." Ahn focuses exclusively on photolithographic masks and makes no mention of solder printing. As such, the undersigned does not understand how the Examiner reads Ahn's discussion of a photolithographic mask as teaching "printing orifices ... positioned for alignment with a contact of an electronic component during the solder printing operation." Accordingly, the undersigned believes claim 14 as filed was distinguishable from Ahn.

In the interest of advancing prosecution, though, claim 14 has been amended to specify that the stencil is a soldering stencil having solder printing orifices. The entire purpose of Ahn's specially designed photolithographic masks is to counter the effects of constructive interference of light waves entering adjacent mask holes. As such, this solution is exclusive to photolithography and would have no bearing on stencil printing. In particular, Ahn would not suggest to one skilled in the art of stencil printing that varying the size of solder printing orifices would provide any benefit because constructive interference of light waves has no bearing on the stencil printing process. Accordingly, the undersigned respectfully submits that claim 14 is patentable over Ahn.

The Examiner rejected claims 15 and 17 and anticipated by Ahn and rejected claims 16 and 18 as obvious over Ahn in view of Elliot. Elliot simply shows a conventional registration process for stencil printing and does not cure the defects of Ahn noted above. Without conceding the merit of the Examiner's rejections of claims 15-18, the undersigned respectfully submits that these claims are patentable at least by virtue of their dependence from an allowable base claim. The undersigned acknowledges the Examiner's indication that claim 19 defines allowable subject matter and the present amendment is not believed to alter that conclusion.

III. Comments on Statement of Reasons for Allowance

In allowing claims 1-13 and 20-81, the Examiner gave the following Statement of Reasons for Allowance:

The combination of a printing stencil structure as claimed including printing orifices of varying sizes which are proportional to a distance of the printing orifices from the locus or the center of the stencil body as claimed in claims 1-13 and 19-81 are not taught by the prior art of record.

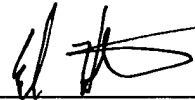
The undersigned would like to note that not all of the claims (e.g., claim 45) require printing orifices with varying sizes. With respect to the other claims, the undersigned agrees with the Examiner's conclusion of patentability, but submits that the claims may be patentable for reasons in addition to those identified by the Examiner.

IV. Conclusion

In view of the foregoing, the claims pending in the application comply with the requirements of 35 U.S.C. § 112 and patentably define over the applied art. A Notice of Allowance is, therefore, respectfully requested. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 264-3848.

Respectfully submitted,

Perkins Coie LLP



Edward S. Hotchkiss
Registration No. 33,904

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Correspondence Address:

Customer No. 25096
Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
(206) 583-8888